

were \$12,421 for Medicaid, \$8,957 for Private or Employer provided, \$8,942 for Selfpay/Indigent/Charity, and \$8,504 for Medicare.

DISCUSSION

Although persons ages 65 and older comprise only 12 percent of the population in North Carolina, they account for 40 percent of hospital costs. These figures are comparable to national statistics⁶ and the findings in other states⁷. The Census Bureau estimates that the elderly population will increase to approximately 22 percent of the population by the year 2030.^{8,9} As the population ages, an even greater percentage of hospital costs will be attributed to the elderly.

In the 1989 SCHES Study of mortality among persons aged 65 and older¹, the leading causes of death were heart disease, cancer, cerebrovascular disease, pneumonia/influenza, and chronic obstructive pulmonary disease. These diseases are also the leading causes of hospitalization in this age group.

The number of hospital discharges, the rate of discharges, the average days of stay, and the average hospital charges all reasonably indicate the burden of hospitalization attributable to each principal diagnosis. However, the contribution of comorbid conditions to hospitalization is probably underestimated by the number of discharges and the ratio of all-listed diagnoses to principal diagnoses. The hospital discharge records can accommodate only five diagnostic codes, and all five are used in 65 percent of the hospital discharge records for persons 65 years of age and older. Many of the original hospital records may have contained more than five diagnoses; the omission of diagnoses beyond the fifth would result in a downward bias in the ratio of the all-listed to principal diagnoses.

While the hospital discharge rates by county of residence or by principal diagnosis serve as indicators of the level of hospitalization, they should not be taken to represent the incidence of hospitalization in the population. In these hospital discharge data, one cannot distinguish between persons having only one hospitalization and persons having more than one hospitalization. Personal identifiers are not part of the hospital discharge file. Hospitalizations could not be examined by person-specific data. Other research has shown that within a single year, as many as 11.8 percent of patients are readmitted.¹⁰

The average days stay and hospital charges for Medicaid patients were found to be much higher than that for any other payer class. Extremely ill patients who exhaust their Medicare benefits may resort to Medicaid benefits. Also, Medicaid would cover persons who are not eligible for Medicare. These Medicare ineligible may have been disabled for a lifetime, never employed, and therefore never have contributed to the Social Security System.

Additional studies could shed light on three seemingly anomalous findings: 1) for heart disease and cancer, the two leading principal diagnoses, females experienced, on the average, longer hospital stays than males but incurred lower hospital costs; 2) the average hospital charges went down with increasing age, although the average days stay was longer; and 3) for Medicaid patients, the average hospital stay is 10 times longer and nearly 50 percent more costly than that of Medicare patients. Further, it is hoped that these data on hospitalization of the elderly in North Carolina will prove useful to those involved in the prevention and treatment of health problems in this population.